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THAKUR, VIREN A

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1761

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                               |                                  |  |
|------------------------------|-------------------------------|----------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/723,593 | Applicant(s)<br>WOODHOUSE ET AL. |  |
|                              | Examiner<br>Viren Thakur      | Art Unit<br>1761                 |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/18/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: on page 18, line 2 coupons is labeled as item 5.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 112*

3. **Claims 17, 59 and 68-72 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Instant claim 17 recites wherein the lubricant is selected from the group consisting of "canola... and rapeseed oil." The Examiner asserts that canola oil is

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obtained from rapeseed oil; therefore the claim is unclear as to what is the difference between using canola oil and using rapeseed oil, since canola oil is a rapeseed oil.

Instant claims 6 and 71 recites wherein a high shear mixer is used to form an admixture thereof. The claim is unclear as to what is considered high shear and further recitation of what level of mixing is considered high shear was not defined within the specification.

Instant claim 59 recites the limitation "said edible transfer tattoo." This limitation lacks proper antecedent basis. Although "an edible transfer tattoo" is recited in the preamble of the claim, the method does not recite an edible transfer tattoo but rather only printing indicia on the edible substrate.

Instant claim 72 recites the limitation "ready removal." This term is a relative degree of the ability to remove the sheet from the tattoo which would depend on the capabilities of the user of the tattoo. Further regarding instant claim 72, the limitation "the edible transfer tattoo" lacks proper antecedent basis. Although "an edible transfer tattoo" is recited in the preamble of the claim, the method does not recite an edible transfer tattoo but rather only printing a design on the sheet.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1, 2, 19, 21, 27, 43, 53, 58, 60-62 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoy (US 20020090420).**

Regarding instant claim 1, Hoy discloses an edible substrate (Column 2, Lines 7-14; paragraph 0011) comprising a first starch component (Column 6, Line 53; paragraph

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0057), an emulsifier (Column 5, Line 67; paragraph 0052), a first thickening agent (Column 6, Lines 8-19; paragraph 0052) and a lubricant (Column 6, Line 1; paragraph 0052). Regarding the thickening agent, Hoy discloses food gums as "binding agent;" nevertheless, it has been well known in the art that food gums are thickeners, and this is further evidenced by Applicant's claims that state wherein the thickening agent is a gum. The Examiner notes that the claim recites that the edible substrate is adapted for having an edible ink composition printed thereon. In this case, Hoy discloses edible inks applied to the edible substrate (see claim 9 on page 5 of the publication). Regarding instant claim 2, as discussed above, Hoy discloses modified starch as the starch component. Regarding instant claim 19, Hoy discloses using sugar, which is a sweetener (Paragraph 0055). Regarding instant claim 27, Hoy discloses a second starch component, such as grains in the form of flour or whole grain (Paragraph 0058), a colorant (Paragraph 0052), water (Paragraph 0053), a humectant (Paragraph 0052), a preservative (Paragraph 0053), a second thickening agent (Paragraph 0053). In this cited paragraph, Hoy states that honey may serve as both a binding agent and a sweetener. Therefore by using honey as a sweetener, Hoy also discloses adding a second thickening agent. By adding a sweetener, such as honey or sugar (Paragraph 0055), Hoy thus discloses a flavorant. Regarding instant claim 43, Hoy discloses glycerol (glycerine) (Paragraph 0053), which is a humectant, but also has been well known to act as a plasticizer. Regarding instant claim 53, Hoy discloses an edible substrate and an edible ink composition attached to said edible substrate. Hoy further discloses wherein the edible ink composition can be in the form of a decal, sticker, rice paper which is then applied to the edible substrate (Paragraph 0040). Therefore, the edible ink would have been releasably attached to the edible substrate. Regarding instant claim 58, Hoy discloses a sheet of an edible substrate (See Figure 6B) and further teaches printing indicia on said sheet (paragraph 0040). Regarding instant claim 60, said indicia are silk screened onto the edible substrate (See Paragraph 0040). Regarding instant claim 61, Hoy discloses using edible ink (See Paragraph 0044). Regarding instant claim 62, Hoy discloses a composition comprising a comestible product and indicia. The claim recites wherein the indicia must only be from an edible transfer tattoo, and in this case, the ink which would have formed the design for an

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edible transfer tattoo is applied to the substrate of Hoy. Therefore the indicia on the substrate of Hoy are considered from an edible transfer tattoo.

**6. Claims 1, 17, 19, 27, 30, 37-43, 53, 58, 60-61 and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by Macpherson et al. (US 5017394).**

Macpherson et al. disclose an edible substrate (Column 1, Lines 34-37) comprising a first starch component, such as cake flour (See Second Example on Column 7, Lines 30-37), a first emulsifier, such as Polysorbate 80 (See Second Example on Column 7, Lines 30-37), a first thickening agent, such as glycerin (See Second Example on Column 7, Lines 30-37) and a lubricant, such as soybean oil (Column 10, Line 12). Macpherson et al., further teach wherein edible ink is applied to the substrate (Column 5, Lines 42-46), thus the substrate of Macpherson et al., is considered adapted for having an edible ink composition printed thereon. Regarding instant claim 17, Macpherson et al. disclose wherein soybean oil is added to the substrate (Column 10, Line 12). Regarding instant claim 19, Macpherson et al., disclose using dried fondant sugar (Column 7, Line 31), which is considered a sweetener. Regarding instant claim 27, Macpherson et al., further disclose wherein said edible substrate comprises a second starch component such as corn starch (Column 7, Line 33 in the second example). Regarding instant claim 30, the Examiner asserts that corn starch has been known to the ordinarily skilled artisan to be referred to as maize starch. Further regarding instant claims 27 and 37-39, Macpherson et al. disclose using a whitening agent such as titanium dioxide (Column 7, Lines 45-48), as a colorant. Regarding the percentage of titanium dioxide, Macpherson et al. teach 4 parts of titanium dioxide added to the substrate of example 2 (Column 7, Lines 45-46). The total number of parts in example 2 is 800 parts. 4 parts per 800 parts equals 0.005 which is 0.5 percent. This falls within the instantly claimed range. Further regarding instant claim 27, Macpherson et al. disclose water (Column 7, Line 30) and a plasticizer, such as glycerin (Column 7, Line 35), as recited in instant claim 43. In the second example, Macpherson et al. disclose 20 parts glycerin per 800 parts total, which equals 0.025, or 2.5 percent. This falls within the claimed range of instant claims 41 and 42. Since the example further includes water and since glycerin is known to be hygroscopic, in the process it would have been inherent that the addition of glycerin would also act as a plasticizer. The

Examiner asserts that components such as glycerin have been known to have thickening properties. Regarding instant claim 40, Macpherson et al., discloses using water at 290 parts per 800 parts total, which is equivalent to 36.25 percent (See Second Example). Regarding instant claim 53, Macpherson et al. disclose an edible substrate, as discussed above, and an edible ink composition (Column 5, Lines 39-48). In being releasably attached the Examiner asserts that the edible ink must only be capable of being released (i.e. releasable). In this case, since Macpherson et al., disclose an edible ink attached to an edible substrate, the edible ink would have been capable of being released from the edible substrate. Regarding instant claim 58, Macpherson et al., disclose preparing a sheet of an edible substrate (Column 7, Lines 24-51). The base shape is formed into a sheet which is then also formed into a desired shape. Regarding instant claim 60, Macpherson et al., disclose using silk screening for adding pictorial images onto the base shape (See Abstract). Regarding instant claim 62, Macpherson et al. disclose a comestible product and indicia added to said comestible. Since edible transfer tattoos would require edible ink and since the product of Macpherson et al. uses edible ink, it can be considered that the ink is from an edible transfer tattoo.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
  1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**9. Claims 3-14, 20, 24-26, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy (US 20020090420) in view of Igoe (Dictionary of Food Ingredients).**

Hoy is taken as cited above.

Regarding instant claims 3-4, although Hoy teaches modifies starch as a first starch component, Hoy is silent in teaching wherein the starch is present at from 0.1 to about 0.6 percent, as recited in instant claim 3 and further at from 0.1 to 1 percent, as recited in instant claim 4.

Nakatsuka et al. teach using modified starch in a molding composition to form shaped articles comprising 10 percent or less of modified starch (Column 6, Line 60 to Column 7, Line 4). Nakatsuka et al., further teach that the modified starch improves moldability and processability of the composition and the physical properties of the sheet and film. Igoe is further relied on as evidence that modified starch is used in fabricated foods as a thickener, binder and stabilizer (Page 93). Nevertheless, depending on properties to be desired by the edible substrate of Hoy, it would have been obvious to have used less than 10 percent modified starch, as taught by Nakatsuka et al. Additionally, to use any amount of modified starch less than 10 percent would have been obvious to the ordinarily skilled artisan as a matter of routine experimentation to obtain the desired thickness, stability and binding ability of the mixture for creating the edible substrate (See MPEP 2144.05 IIA).

Regarding instant claims 5-9, Hoy teaches the use of an emulsifier but is silent in teaching wherein the emulsifier is lecithin and wherein said lecithin is present at between 0.1 to 3.5 percent, as recited in instant claim 5; 0.1 to 2 percent, as recited in 8 and further wherein said first emulsifier is present at from about 0.1 to 1 percent, as recited in instant claim 9.

Igoe teaches wherein lecithin has been a well-established emulsifier in the art which has typically been used at between 0.1 to 1 percent. Igoe teaches that lecithin is used to aide in the formation of emulsions and as a wetting agent and an anti-sticking



agent and further aides in mixing dry ingredients while stabilizing air cells in baked goods (See page 83). The Examiner further notes that the use of lecithin at between 0.1 to 1 percent has been well established, as evidenced by Igoe. Additionally, Hoy teaches the use of additional ingredients such as emulsifiers for enhancing the manufacturability of the edible substrate (Paragraph 0052). Since Hoy teaches the combination of starches, flour, flavorants as discussed above, it would have been obvious to use an emulsifier, such as lecithin, to aide in the mixing of the other ingredients in the mixture. Therefore, since Hoy teaches the use of an emulsifier for enhancing the manufacturability or rigidity of the edible substrate, to choose a well known emulsifier such as lecithin would have been obvious to the ordinarily skilled artisan for the purpose of enhancing the manufacturability of the edible substrate of Hoy, such as by improving the ability to admix the other ingredients in the edible substrate of Hoy.

Regarding instant claims 10-14, Hoy teaches applying a thickening agent, such as food gum, as recited in instant claim 11, but is silent teaching wherein the specific thickening agent is present at from 0.1 percent to about 2.5 percent, as recited in instant claim 10; wherein the gum is xanthan gum, as recited in instant claim 13.

Instant claim 12 recites wherein the gum used is gum acacia, locust bean gum, Arabic gum and xanthan gum. The Examiner asserts that these gums are all well known in the art to be used as thickeners in food products. Nevertheless, Applicant has constructively elected xanthan gum as the thickener. Igoe teaches that xanthan gum is very pseudoplastic, which results in a decrease in viscosity with increasing shear. Igoe further teaches that xanthan gum has been used in the art at between 0.05 to 0.5 percent (Page 156), which falls within the recited range of instant claims 10 and 14. Therefore, to use xanthan gum would inherently have providing the thickening or binding properties desired by Hoy for the purpose of admixing and enhancing the ingredients used in the edible substrate of Hoy. To use xanthan gum at between 0.1 and 2.5 percent and further at between 0.1 to 1 percent would have been obvious to the ordinarily skilled artisan, based on the teachings of Igoe, for the purpose of providing a specific amount of the binding agent to produce the edible substrate of Hoy with the desired enhanced manufacturability and rigidity. Even further, since the use of xanthan gum as a thickening agent has been recognized in the art, as taught by Igoe, to use a

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specific range would have been obvious through routine experimentation (See MPEP 2144.05 IIA).

Regarding instant claims 20, 25 and 26, Hoy is silent in teaching an acidity regulator, as recited in instant claim 20; wherein said acidity regulator is present from 0.1 to 1 percent, as recited in instant claim 25 and wherein said acidity regulator is citric acid, as recited in instant claim 26.

Igoe teaches that citric acid has been a well known to be used as an antioxidant which prevents spoilage (See Page 35) and is further used to prevent discoloration. Preventing spoilage of food products has been a well established goal in extending the shelf-life of a food product; therefore it would have been obvious to the ordinarily skilled artisan to use citric acid in the product of Hoy for its antioxidation and spoilage prevention properties. Even further still, Hoy teaches adding colors to the edible substrate; and Igoe teaches that citric acid prevents discoloration. Therefore it would have been obvious to the ordinarily skilled artisan to use citric acid to prevent discoloration of the design imprinted onto the edible substrate of Hoy.

Regarding the percentage of the acidity regulator, Igoe teaches varying percentages, such as from 0.25-0.4 percent in fruit drinks and carbonated beverages and from 3 to 4 percent in cheese. Nevertheless, in being an acidulant and an antioxidant, Igoe teaches that citric acid has been recognized in the art to use citric acid for Applicant's intended function. That is, to drive the acidity of the product, which additionally would have prevented spoilage of the product. Thus since the prior art teaches several use ranges of citric acid in different food product, to use a specific optimal working range of citric acid that would have been the result of routine experimentation would not have provided a patentable feature over the prior art (See MPEP 2144.05 IIA).

Regarding instant claim 25, Hoy is silent in teaching wherein the sweeteners comprise about 10 percent sugar and up to about 6 percent dextrose monohydrate.

Nevertheless, in paragraph 0055, Hoy teaches using sugar and fructose in combination for providing flavoring to the food product. Dextrose hydrate, as taught by Igoe (page 44), is the most often used corn sweetener, which has been commonly used in sweetening ice cream, bakery products and confections. Nevertheless, since Hoy teaches a combination of sugar and fructose, to substitute the fructose with dextrose

monohydrate would have been obvious to the ordinarily skilled artisan since the prior art teaches that both fructose and dextrose are both simple sugars that have been known to be used for the similar purpose of sweetening food product (See MPEP 2144.06). Thus to substitute fructose for dextrose would not have provided a patentable feature over the prior art. Regarding the specific percentage of each of the sweetening agents, it has been well known to the ordinarily skilled artisan to vary the amounts of sweetening agents for the purpose of achieving the desired sweetness to the food product. Thus, combining simple sugars for sweetness as taught by the prior art has been recognized as Applicant's intended function; thus, absent any clear and convincing evidence to the contrary, to find a specific range for each of the sugars would have been the result of routine experimentation for the purpose of achieving the desired sweetness for the product.

Regarding instant claim 30, Hoy is silent in teaching wherein the second starch component is selected from the group consisting of potato, wheat, tapioca and maize starch, as recited in instant claim 30.

Igoe teach that cornstarch has been well known to form semisolid gels that upon cooling forms strong adhesive films (Page 39). Analogously, Hoy teaches that corn starch has been a well known binding agent when used in combination with ingredients such as water (Paragraph 0053) and further teach adding ingredients to the edible substrate for the purpose of enhancing the manufacturability and rigidity of the edible substrate. Based on the teachings of Igoe, it would have been obvious to include corn starch as a second starch ingredient for the purpose of providing rigidity to the substrate of Hoy, since when mixed with water, Igoe teaches that corn starch would form a semi-solid gel which has strong adhesion.

- 10. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy (US 20020090420) in view of Omura (US 6627244) and Igoe (Dictionary of Food Ingredients).**

Hoy is taken as cited above.

Hoy teaches using a lubricant such as glycerol and propylene glycol but is silent in teaching wherein the lubricant is present in a range from about 3 to 10 percent, as recited in instant claim 16; wherein the lubricant is selected from the group consisting of

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canola, soy, corn, sunflower, safflower and rapeseed oil, as recited in claim 17 and further wherein said lubricant is rapeseed oil, as recited in instant claim 18.

Igoe teaches that oils, such as rapeseed oil has been a well known stabilizer and thickener (Page 119). Additionally, Omura teaches shaping green tea compositions into molded patten comprising a variety of shapes (Column 6, Lines 1-6). In order to improve the ability of the composition to form the desired molded shapes, Omura teaches using a lubricant such as rapeseed oil (Column 8, Lines 45-51), at up to 8 percent (Column 8, Lines 51-54). Therefore, Omura teaches using a lubricant in the instantly recited range for the purpose of aiding in shaping the edible compositions into desired shapes. Based on the teachings of Omura, it would have been obvious to use the range of rapeseed oil, as taught by Omura for the purpose of improving the ability of the composition of Hoy to form the desired shapes.

**11. Claims 22-23 and 50-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy (US 20020090420).**

Hoy is taken as applied above. Hoy is silent in teaching wherein the sweetener is present from 0.1 to 20 percent, as recited in instant claim 22 and wherein the sweetener is present from 5 to 15 percent by weight, as recited in instant claim 23.

However, it has been well established in the art to add differing amounts of a sweetener in order to obtain a particular amount of sweetness – more sweetness would require a larger amount of the sweetener while less sweetness would require lesser amounts of the sweetener. Therefore it would have been routine experimentation by the ordinarily skilled artisan to use a sweetener such as sugar from between 0.1 to 20 percent or between 5 to 15 percent by weight depending on the amount of sweetness desired for the edible food product. Therefore to use either 0.1 to 20 percent or 5 to 15 percent of the sweetener, absent any clear and convincing evidence to the contrary, would have been an obvious choice depending on the desired sweetness and thus would not have provided a patentable feature over the prior art.

Regarding instant claim 50 and 51, Hoy is silent in teaching the recited percentages of the flavorant. However, Hoy teaches adding a flavorant and therefore it would have been obvious to the ordinarily skilled artisan to add more or less of a flavorant to achieve a desired flavor. Therefore to specifically use the recited ranges

would have been a result of routine experimentation for the purpose of achieving the desired flavor in the edible substrate.

Regarding instant claim 52, Hoy is silent in teaching wherein the edible substrate has a thickness of from 100 to 600 micrometers. Nevertheless, Hoy teaches that the thickness will vary depending on the materials used and the type of animal which would consume the edible substrate. Therefore, it would have been obvious to the ordinarily skilled artisan that smaller animals or animals not capable of consuming thicker pieces of food would require a substrate that is more thin. Thus to make the substrate between 100 and 600 micrometers, absent any clear and convincing evidence, would have been a change in size depending on the type of animal that would consume the substrate, which would not have imparted a patentable feature over the prior art.

- 12. Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy (US 20020090420) in view of Igoe (Dictionary of Food Ingredients), as applied to claims 5-14, 20, 24-26, 30, above and Manley (Technology of Biscuits, Cookies and Crackers).**

Hoy is taken as applied above. Hoy teaches a second starch component as discussed above, and further teaches wherein corn starch is a well known binding agent.

However, Hoy is silent in teaching wherein said second starch component is present at between 10 to 20 percent, as recited in instant claim 28; wherein said starch is present at from 12 to 15 percent, as recited in instant claim 29 and wherein said starch. Hoy is further silent in teaching wherein the second starch component is selected from the group consisting of potato, wheat, tapioca and maize starch, as recited in instant claim 30.

Manley teaches that up to 10 to 15 percent of the flour used in recipes can be replaced with corn starch for the purpose of diluting the flour. As a result, this aides in making the dough less though and easier to sheet. (See *Function* on page 105). Analogously, Hoy teaches wherein the second starch component can be flours made from corn, wheat and combinations thereof (Paragraph 0058). Therefore, based on the teachings of Manley, it would have been obvious to have replaced between 10 and 15 percent of the flour made of a combination of wheat and corn with corn starch, as taught by Manley, for the purpose of making the dough easier to sheet. Hoy teaches that

additional components can be added to increase the manufacturability of the food product. Thus, by adding corn starch, as taught by Manley, the ability to sheet and form more of the edible greeting cards of Hoy would have been further improved.

**13. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy (20020090420) in view of Denton (US 4837031).**

Hoy is silent in teaching a disintegrant present at from about 1 to about 11 percent, as recited in instant claim 31; wherein said disintegrant is present at from about 1.5 to 7 percent by weight, as recited in instant claim 32 and wherein said disintegrant is microcrystalline cellulose.

Denton teaches pharmaceutically acceptable cellulosic disintegrants comprising microcrystalline cellulose used at between 6 to 18 weight percent, for the purpose of imparting excellent dissolution and disintegration characteristics to the tablets made therefrom (Column 1, Line 63 to Column 2, Line 5). Thus, Denton provides the teaching of using microcrystalline cellulose that includes percentages within the instantly claimed range. This teaches the ordinarily skilled artisan that microcrystalline cellulose provides disintegration properties for the purpose of carrying and dispersing a medicinal product. Nevertheless, Hoy teaches adding vitamins and nutritional supplements (Paragraph 0057), therefore, based on the teachings of Denton, who teaches that microcrystalline cellulose used at 6 percent, it would have been obvious to the ordinarily skilled artisan to use microcrystalline cellulose for the purpose of providing a carrier and dispersing agent for the vitamins used by Hoy.

**14. Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy (US 20020090420) in view of Karpe et al. (US 6616916).**

Hoy is taken as cited above.

Hoy teaches a second thickening agent being added to the edible substrate as a result of multiple uses of ingredients, as discussed above, but is silent in teaching wherein the second thickening agent is present at from 1 to 17 percent, as recited in instant claim 34; wherein said second thickening agent is present at from about 5 to 15 percent, as recited in instant claim 35; and wherein said second thickening agent is selected from the group consisting of locust bean gum, Arabic gum, polysorbate, sodium

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alginate, xanthan gum, acetic esters of monoglycerides, polyglycerol polyricinoleate and gum acacia, as recited in instant claim 36.

Karpe et al. teach using thickening agents such as a combination of gum acacia and xanthan gum at between 0 to about 15 percent of the composition (Column 4, Lines 44-57). Karpe et al. provides the teaching that using gum acacia at the disclosed levels would result in exhibiting thickening and stabilizing properties to a composition.

Analogous to Hoy, Karpe et al. teach using more than one thickening agent.

Furthermore, Karpe et al. teach wherein gum acacia can be incorporated into the composition at between about 0 and 15 percent for the purpose of providing a gelatinous structure that provides stability against phase separation (Column 4, Lines 44-46). This teaches one having ordinary skill in the art that gum acacia used at the disclosed levels, irrespective of the type of product, would provide stability and prevent phase separation, and since Hoy teaches adding components into the edible substrate that are solid and liquid, aqueous and non-aqueous it would have been obvious to one having ordinary skill in the art to use gum acacia at the levels taught by Karpe et al., for the purpose of preventing phase separation upon mixing the ingredients. Such a modification would have ensured the uniformity of the mixed ingredients in the produce of Hoy.

**15. Claim 37-40 and 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy (US 20020090420) in view of Macpherson et al. (US 5017394).**

Hoy is taken as applied above and further teaches adding colorants into the edible substrate, but is silent in teaching wherein the colorant is present at from about 0.01 to 4 percent, as recited in instant claim 37; wherein said colorant is a whitening agent, as recited in instant claim 39 and wherein said whitening agent is titanium dioxide, as recited in instant claim 39.

Macpherson et al. analogously teach an edible substrate onto which is printed a design or indicia using edible ink, as discussed above. Macpherson et al. further teach wherein a coloring agent, titanium dioxide is used at 0.5 percent. Nevertheless, since Hoy teaches that colors can be added to the edible substrate, it would have been obvious based on the teachings of Macpherson et al. to use titanium dioxide at 0.5 percent for the purpose of adding a white color to the substrate of Hoy. Nevertheless,

using food coloring agents to add colors to foods has been well known to the ordinarily skilled artisan.

Therefore to use any coloring agent and even further, to use titanium dioxide, a well known white pigment color additive would have been an obvious choice by the ordinarily skilled artisan for providing the desired color to the substrate. It would also have been obvious based on the knowledge of the ordinarily skilled artisan that adding more of a coloring agent would have resulted in the substrate exhibiting a stronger color while using less of the coloring agent would have resulted in a lighter color. Therefore to use a coloring agent and to use a specific amount of the coloring agent would not have provided a patentable feature over the prior art.

Regarding instant claim 40, Hoy teaches adding water to the edible substrate (Paragraph 0053) but is silent in teaching wherein the water is present at between 28 and 53 percent.

Macpherson et al., teach using water at 290 parts per 800 parts total, which is equivalent to 36.25 percent. This falls within the claimed range. Nevertheless, Hoy teaches adding water in combination with a binding agent for the purpose of forming a cohesive product. Nevertheless, Macpherson et al., analogously teach an edible substrate comprising substantially similar ingredients to that of Hoy, such as water, a sweetener, corn starch, a second starch component, an emulsifier, and a thickener (See Second Example). Therefore it would have been obvious to incorporate similar amounts of water for the purpose of ensuring that all the components of the edible substrate are appropriately blended and remain cohesive. In addition, it has been well known to the ordinarily skilled artisan that water also provides a specific level of moistness to the food product. Therefore it would have been obvious to vary the amount of water used for the edible substrate for the purpose of providing a more moist or more dry food product. Such a modification would have resulted in a crunchy versus a chewy product which would cater to the varying preferences of the animals that would consume Hoy's product.

Regarding instant claims 44 and 45, Hoy is silent in teaching a second emulsifier present at from 0.1 to 4.5 percent, as recited in instant claim 44; between 0.5 to 1.5 percent as recited in instant claim 45.



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Macpherson et al., teach using an emulsifier at 2.5 percent in the second example on column 7 (20 parts / 800 total parts x 100). Polysorbate is a well known emulsifier and thus it would have been obvious to use polysorbate at the 2.5 percent, as taught by Macpherson et al., for the purpose of ensuring that the various components remain in an evenly mixed emulsion. Nevertheless, since Hoy already teaches using first emulsifier and further teach that additional added components can also have multiple uses (Paragraph 0053) it would have been obvious to the ordinarily skilled artisan that a lesser amount of a second emulsifier could have been used. Therefore, to use less than 2.5 percent, as taught by Macpherson et al., would have been obvious to the ordinarily skilled artisan as a result of routine experimentation for determining how much of a second emulsifier provides the desired properties.

- 16. Claims 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy (US 20020090420) in view of Macpherson et al., (US 5017394) and Iggoe (Dictionary of Food Ingredients).**

Hoy teaches using glycerol (glycerin) as a humectant but is silent in teaching wherein glycerol (glycerin) is present as a plasticizer at from about 0.1 to 10 percent, as recited in instant claim 41; 2 to 5 percent as recited in instant claim 42.

Macpherson et al. teach using glycerin at 20 parts per 800 parts total, which equals 2.5 percent (See Second Example).

Iggoe teaches that glycerol (glycerin) functions as a humectant and a plasticizer and has been known to be used for the purpose of preventing drying out of the food product (Page 66-67). Hoy further teaches that products can have multiple purposes. On column 6, line 17-18, Hoy teaches that honey may serve as both a binding agent and as a sweetener. This teaches the ordinarily skilled artisan that other ingredients such as glycerin (glycerol) can also be used as both a plasticizer and a humectant.

Nevertheless, Macpherson et al., analogously teach an edible substrate comprising substantially similar ingredients to that of Hoy, such as water, a sweetener, corn starch, a second starch component, an emulsifier, a plasticizer and a thickener (See Second Example). Therefore it would have been obvious to the ordinarily skilled artisan to use glycerin at about 2.5 percent, as taught by Macpherson et al. for the purpose of

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providing moisture (as a humectant) and as a plasticizer, as taught by Igoe for the purpose of preventing drying out of the edible substrate.

- 17. Claims 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy (US 20020090420) in view of Durst (US 3434843) and Igoe (Dictionary of Food Ingredients).**

Regarding instant claims 46-48, Hoy teaches using a humectant but is silent in teaching wherein said humectant is present at from 0.1 to 15 percent and from 0.3 to 10 percent; and wherein said humectant is selected from glucose syrup, xylitol and sorbitol.

Durst teaches a food designed to provide balanced diet that incorporates essential nutrients into a unitary food piece (Column 1, Lines 16-20) that comprises as a humectant, either glycerin or sorbitol or other humectants (Column 2, Line 49 to Column 3, Line 5). In example 1 on column 6, Durst teaches using glycerin at 7 percent.

Igoe teaches that sorbitol has been a well known humectant (Page 134) used for maintaining moistness in pet foods (Page 135) and also provides low calorie sweetness for the diet conscious consumer (Page 135).

Based on the teachings of Durst, it would have been obvious to have used glycerin at 7 percent for the purpose of maintaining a specific level of moistness to the food product. Durst also teaches the equivalence of using sorbitol as a humectant and Igoe provides further evidence of sorbitol used as a humectant in food products. Similarly, Hoy teaches using a humectant and further teaches a pet food product. Therefore, it would have been obvious to have used sorbitol at 7 percent since Durst teaches that sorbitol can similarly be used for providing moisture retention to food products and since Igoe teaches that sorbitol has been known to be used in pet foods.

- 18. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy (US 20020090420) in view of CoffeeCakes & Breads.**

Hoy is silent in reciting the disclosed method steps for preparing an edible substrate sheet, however the Examiner asserts that the ingredients of Hoy would inherently have to be blended in order to form the edible substrate. As can be seen from the figures in Hoy, the edible substrates are in the form of sheets and thus would necessarily have to have been formed into a sheet and then shaped. Nevertheless, Hoy

does not teach first melting a fatty mixture and subsequently adding the heated fatty mixture to the liquid mixture.

Coffeecakes & Breads is relied on to teach that fats such as butter have been well known to be melted and then added to a liquid (See Steps 1 and 2). After blending the liquid mixture (Step 1) with the fat mixture (Step 2), the dry ingredients are added and blended with the other liquid and fats. Nevertheless, melting the fat for the purpose of improving the dispersion of the fat has been well established in the prior art and thus would have been an obvious step to the ordinarily skilled artisan for the purpose of ensuring that the emulsifiers and fatty lubricants of Hoy are evenly dispersed so as to produce a uniform mixture when added to the rest of the ingredients.

**19. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Macpherson et al.**

Macpherson et al., teach heating a fatty phase mixture comprising a lubricant and an emulsifier and blending a mixture of dry ingredients (Column 7, Lines 42-48). Instead of blending the heated fatty phase mixture with the liquid mixture, Macpherson et al., teach adding the heated fatty phase mixture to a blend of the liquid mixture with the dry ingredients. Nevertheless, absent any evidence of new and unexpected results, to disperse the heated fatty phase mixture with the liquid and subsequently blend with the dry ingredients would have been considered a change in the sequence of adding ingredients, that would not have provided a patentable feature over the prior art (See MPEP 2144.04 IV).

**20. Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy in view of Coffeecakes & Breads, as applied to claim 54 and in further view of Iggoe.**

Hoy and Coffeecakes & Breads is silent in teaching an acidity regulator. As discussed above in paragraph 9, Iggoe teaches that acidity regulators, such as citric acid have been well known to be used for its antioxidant and antispiling properties. Therefore, it would have been obvious to use citric acid to control the acidity while also preventing spoiling of the food product.

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- 21. Claims 56-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy in view of Coffeecakes & Breads, as applied to claim 54, and in further view of Durst.**

Hoy and Coffeecakes & Breads is silent in teaching a second humectant and wherein said second humectant is glucose syrup.

Durst teaches corn syrup (also known as glucose syrup) as a humectant (Column 2, Lines 69-70). Durst also teaches corn syrup and glycerin used in combination, as in example 1 on column 6. Thus Durst teaches using a combination of humectants for the purpose of providing uniform moisture to the food product. It is also known to the ordinarily skilled artisan that corn syrup is also a sweetener and Hoy teaches in paragraph 0055, using combinations of flavorants and in paragraph 0053, teach that the ingredients can also have multiple functions. Therefore, it would have been obvious to use corn syrup as a combination for the sweetening flavoring and also to additionally provide additional uniform moisture to the food product.

- 22. Claim 59 and 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Macpherson et al. Macpherson et al. is taken as cited above.**

Macpherson et al. is silent in teaching cutting and snagging said sheet. Nevertheless, since Macpherson et al., disclose wherein the edible substrate is placed on a release paper, it would have been obvious to cut and snag the edible substrate for the purpose of facilitating removal of the edible substrate from the release paper. Such a modification would have improved the ability to transfer the edible substrate with the edible ink design thereon to a food product or any other object without having to over handle the edible substrate.

- 23. Claim 59 and 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy.**

Hoy is taken as cited above. Hoy is silent in teaching snagging, however it appears that snagging has been known to be used for facilitating the removal of, for example, a film from another object. Although Hoy does not disclose the edible substrate to be used for an edible transfer tattoo, Applicant has only claimed the edible substrate and the tattoo is only comprised of edible ink which is releasably attached to

the edible substrate. Therefore, based on applicant's intended use, it would have been obvious to include snags in the edible substrate for the purpose of facilitating separation of the edible substrate from the edible ink.

**24. Claims 63-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy in view of Igoe, Omura, Manley, Denton, Karpe and Macpherson.**

Hoy teaches using a gum, lubricant, modified starch and an emulsifier, as cited above in paragraph 5. Hoy is silent in teaching using xanthan gum, rapeseed oil and lecithin; however Igoe is relied on to teach using 0.5 percent xanthan gum as the thickening gum and lecithin at up to 1 percent as the emulsifier, dextrose monohydrate at up to 6 percent, citric acid at up to 4 percent as discussed in paragraph 9. Omura is relied on to teach using rapeseed oil at up to 8 percent as the lubricant, as discussed in paragraph 10, Manley is relied on to teach using maize starch at up to 15 percent, as discussed in paragraph 12. Denton is relied on to teach using microcrystalline cellulose at between 6 and 18 percent, as discussed in paragraph 13. Karpe is relied on to teach using gum acacia as a second thickener at up to 15 percent, as discussed in paragraph 14. Macpherson is relied on to teach using titanium dioxide at 0.5 percent, water at 36 percent, as discussed in paragraph 15 and glycerine at 2.5 percent, as discussed in paragraph 16. Durst and Igoe are relied on to teach using sorbitol at 7 percent, as discussed in paragraph 17 and further to teach glucose syrup, as discussed in paragraph 20.

In claims 63 and 66, the Examiner notes that ranges for titanium dioxide and dextrose monohydrate, for example, recite "up to" a specific percentage. This language thus encompasses wherein the specific component is present at 0 percent as well and thus does not necessarily need to be taught by the prior art.

Nevertheless, the ingredients recited in instant claims 64-67 are well known ingredients known by the ordinarily skilled artisan for Applicant's intended function. The references to Igoe, Macpherson, Denton, Omura, Karpe and Durst provide further evidence of the commonality within the art to use these ingredients for their intended purpose at Applicants' recited ranges. The prior art does not teach the specific percentage of each of the ingredients, as recited in instant claims 65 and 67, however since the ingredients recited by Applicant are well known for Applicants' intended

function to provide a specific percentage of each component would not have provided a patentable feature over the prior art since such percentages would have been the result of routine experimentation for determining the appropriate amount of each ingredient, for the purpose of the food product exhibiting the desired properties.

- 25. Instant claims 68-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoy in view of Igoe, Omura, Manley, Denton, Karpe and Macpherson, as applied to claims 63-67 above, and in further view of Coffeecakes & Breads.**

The combination of references is silent in teaching dispersing a heated mixture of rapeseed oil and lecithin in the premixed liquid using a high shear mixer and then blending in the dry mix ingredients.

Coffeecakes & Breads teaches as discussed in paragraph 18. Coffeecakes & Breads is relied on to teach that heating a mixture of fat based ingredients has been well known in the art fat for the purpose of improving the dispersion of the fat has been well established in the prior art and thus would have been an obvious step to the ordinarily skilled artisan for the purpose of ensuring that the emulsifiers and fatty lubricants of Hoy are evenly dispersed so as to produce a uniform mixture when added to the rest of the ingredients.

Furthermore, blending by using high shear has been well known to aide in providing thorough mixing and emulsification of the mixed ingredients. Since the ingredients of Hoy comprise both emulsifiers, fats, water, other liquids and solids, it would have been obvious based on the knowledge of the ordinarily skilled artisan to blend using high shear for the purpose of ensuring that the ingredients remain in a well dispersed mixture and further so ensure that the oils and liquids remain in an emulsion for even dispersing when formed into a sheet. A representative example of require high shear mixing for emulsions is vinaigrette (or oil and vinegar). In order to ensure that both stay as a well defined mixture, high shear mixing is required to ensure that the oil and vinegar are evenly dispersed within each other for the purpose of providing consistent amounts of each. Therefore, such a modification would have ensured that every bite of the edible substrate of modified Hoy would have had a consistent taste.

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**Conclusion**

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viren Thakur whose telephone number is (571)-272-6694. The examiner can normally be reached on Monday through Friday from 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571)272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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